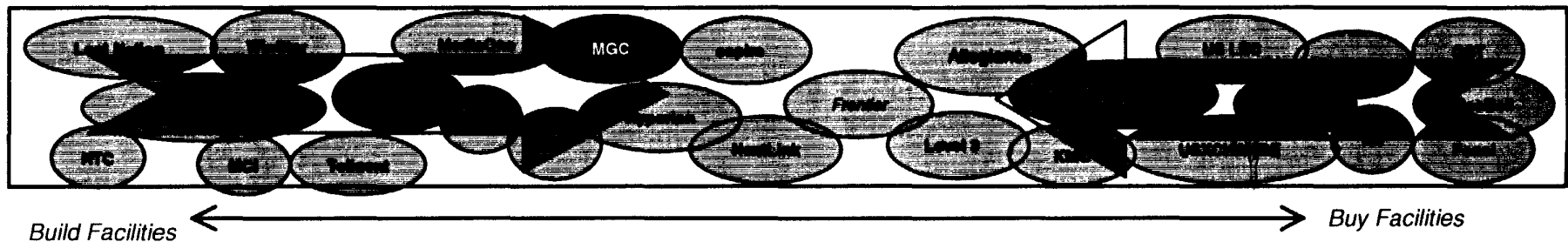


MediaOne Synopsis



MediaOne Group is the third largest cable television system in operation in the United States and, as of this writing, has agreed to merge with AT&T. MediaOne's systems have channel capacity and addressability that are among the highest in the cable industry, and the company plans to offer cable-based telephony, Internet access, and high-speed data services. With its extensive CATV network, MediaOne can bypass ILEC facilities entirely.

MediaOne's cable television network passes approximately 8.5 million homes, and it provides CATV service to about five million customers. The company's systems include large clusters in Georgia, Massachusetts, California, Florida, Detroit and Minnesota. As of December 31, 1998, approximately 97% of MediaOne's total basic subscribers were located in clusters with a population greater than 100,000; this concentration allows for operating efficiencies that enhances MediaOne's ability to develop and deploy new broadband technologies and services by upgrading to hybrid fiber-coax networks. At the same time, MediaOne is positioned as one of the best CLECs to serve the residential market by bundling CATV, telephony, and high-speed data products. As of March 31, 1999, the company has approximately 16,500 residential telephone customers with 22,400 lines. Residential telephone services are available to over 700,000 market ready homes. MediaOne has one Lucent 5ESS switch deployed in the greater Los Angeles area.

MediaOne Synopsis (continued)

Los Angeles

Facilities

One class five switch
-- Lucent 5ESS digital switch

Targeting

- Uniquely positioned to take advantage of the residential market opportunities with integrated cable, telephony, and Internet access offers
- Existing systems pass 8.5 million homes and services are provided to over 5.0 million cable subscribers
- Approximately 97% of customers are located in clusters with a population greater than 100,000

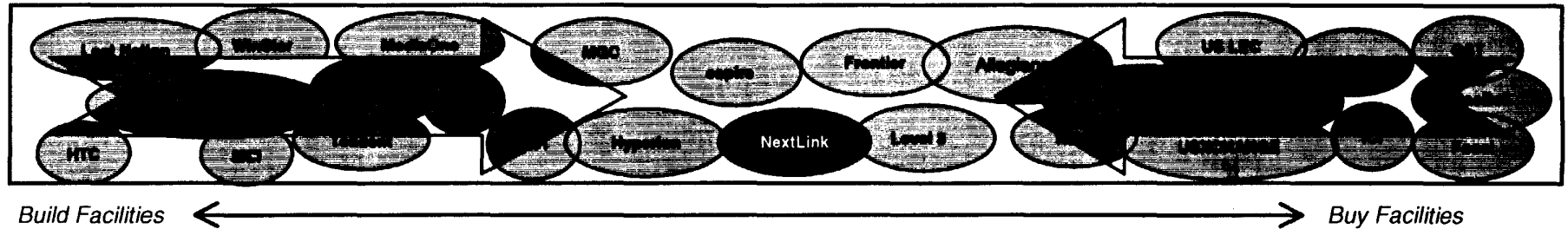
Strategy

- Focuses on existing markets where clustering provides significant operating efficiencies that allow it to develop and deploy new broadband technologies and services
- Believes that its technological platform is the only one that will allow true integration of voice, video and data services

Service Offerings

| | Yes | No |
|---|-----|----|
| Local access (dial tone) | ✓ | |
| Switched services including long distance | ✓ | |
| Dedicated lines (data) | ✓ | |
| Internet | ✓ | |
| Cable Television | ✓ | |

NextLink Synopsis



NextLink, which was co-founded in 1994 by Craig McCaw--the former owner of McCaw Cellular--through his investment company, Eagle River Investments, is an active facilities-based competitor that has engaged in multiple alliances to procure capacity where it has not deployed facilities directly. While NextLink utilizes some UNE loops and ILEC service resale to initially reach customers, facilities-based provision is its primary objective for switched local and long distance services in 38 markets in 14 states. NextLink generally provides its own class five switches and either deploys or secures its own local and long-haul transport capacity from sources other than the ILEC.

NextLink targets small to medium-sized businesses with a bundled service offer that includes local, long distance, and enhanced services. With a nationwide sales force of nearly 350 people, NextLink is implementing a strategy that will enable it to offer end-to-end voice and data communications exclusively over its own facilities. To this end, its number of switches installed has increased from 13 on December 31, 1997, to 21 as of December 31, 1998, and its number of fiber route miles has increased from 133,224 to 195,531. The strategic decision to develop its own network stems from NextLink's stated belief that long-term financial performance will be enhanced if traffic flows over its own network.

NextLink Synopsis (continued)

NextLink just announced the launch of its Dallas-Fort Worth network on December 14, 1998, and claims it will have an operational network footprint able to serve "virtually every business in Dallas." In fact, NextLink already has deployed 84 fiber miles and placed a Nortel DMS 500 switch in the Dallas-Fort Worth Metroplex. In Los Angeles, NextLink owns three distinct local fiber networks that campus the greater Los Angeles area: Gardena, Beverly Hills/West Hollywood, and Orange County (from Fountain Valley, north through Anaheim, and west to Buena Park, Stanton, and Los Alamitos). Additionally, NextLink possesses three class five Northern Telecom DMS10S switches in the greater Los Angeles market. GTE provides some UNE loops to NextLink in the Los Angeles area.

NextLink has several notable deals with other carriers to expand the company's facilities, customer base, and the scope of services. First, in February 1998, NextLink and Metromedia Fiber Network signed a 20-year, \$92 million fiber agreement. The agreement, together with one inked in June 1997, gives NextLink a long-haul, inter-city link between New York and Washington, D.C., as well as access to metropolitan networks of lit fiber in New York (outlying areas), Philadelphia and Washington, D.C. To expand its customer base, NEXLINK completed the acquisition of Chadwick, an IXC (reseller), in the fourth quarter of 1997 for \$5 million stock and debt. In a joint venture announced last July, NextLink entered into a \$700M 50/50 joint venture ("INTERNEXT") with Eagle River Investments for the purchase of 24 dark fibers and one empty conduit in Level 3's 15,000 mile nationwide long haul network. According to NextLink, the INTERNEXT inter-city network will be the centerpiece of NextLink's emerging data strategy. NextLink currently offers LD services through switched resale to its local customers. Over time, however, NextLink has stated it plans to migrate traffic to capacity of Level 3's network as each segment of the long-haul network is completed, thereby gaining network cost savings.

Another significant arrangement is NextLink's 50/50 joint venture with its sister company NEXTEL, which has purchased LMDS licenses that cover 105 million POPs in 41 markets including Los Angeles, San Francisco, San Diego, New York, and Seattle. In addition to its own facilities, NextLink will gain access to a network platform capable of providing broadband services over a wireless local loop, thereby completely bypassing the ILEC. Most recently, in January, 1999,

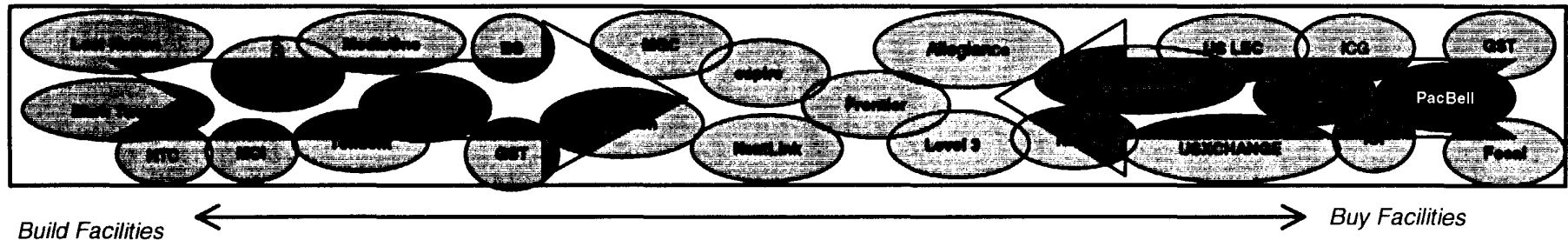
NextLink Synopsis (continued)

NextLink announced that it has invested \$20 million in Covad Communications. As a result, Covad becomes the preferred provider of DSL services to NextLink, and NextLink becomes Covad's preferred provider for local transport and collocation service in its regional data centers.

NextLink Synopsis (continued)

| | Dallas-Fort Worth | Los Angeles | | | | | | | | | | | | |
|-------------------|--|---|-----|----|---|--|---|--|---|--|---|--|---|--|
| Facilities | One class five switch: <ul style="list-style-type: none">– Nortel DMS 500, Nortel access node and multiplexing equipment SONET ring | Three class five switches <ul style="list-style-type: none">– DMS10S Three distinct SONET rings | | | | | | | | | | | | |
| Targeting | <ul style="list-style-type: none">• National strategy of targeting small to medium-sized customers (less than 50 lines) but will pursue large businesses if market opportunity exists.• Prefers to use own facilities due to the higher margins but will use ILEC UNEs and/or service resale as an initial entry strategy. Customers are migrated to NextLink facilities as economically justified.• Offers a suite of bundled services, including long distance, local wireline, and many data/internet services. | | | | | | | | | | | | | |
| Strategy | <ul style="list-style-type: none">• Builds geographically vast fiber networks capable of serving customers in metropolitan and suburban areas.• Uses strategic alliances to expand facilities, customer base, and scope of services.• Offers consolidated billing and higher quality levels with responsive service to attract and retain profitable customers.• Emphasizes efficient provisioning of customer service as one of the keys to competitive success. | | | | | | | | | | | | | |
| Service Offerings | Local access (dial tone) Switched services including long distance Dedicated lines (data) Special access services Internet | <table><tr><th>Yes</th><th>No</th></tr><tr><td>✓</td><td></td></tr><tr><td>✓</td><td></td></tr><tr><td>✓</td><td></td></tr><tr><td>✓</td><td></td></tr><tr><td>✓</td><td></td></tr></table> | Yes | No | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | |
| Yes | No | | | | | | | | | | | | | |
| ✓ | | | | | | | | | | | | | | |
| ✓ | | | | | | | | | | | | | | |
| ✓ | | | | | | | | | | | | | | |
| ✓ | | | | | | | | | | | | | | |
| ✓ | | | | | | | | | | | | | | |

PacBell CLEC Synopsis



PacBell CLEC is a part of SBC/Pacific Bell that was created for out-of-franchise expansion in California. PacBell CLEC is not a separate subsidiary, so it must abide by the same rules and regulations as its parent. Like Pacific Bell, PacBell CLEC is not allowed to offer long distance service because the company has not yet complied with the Section 271 checklist requirements of the *Telecommunications Act of 1996*. The company does not maintain any of its own capacity and typically leases the facilities it needs to meet customer demand.

In the dense market of Los Angeles, PacBell CLEC enjoys brand recognition associated with its parent, which is advantageous for its selective expansion into GTE's territory. PacBell CLEC targets small to mid-size businesses with annual communication expenditures between \$100,000 and \$250,000. It predicts that it will gain market share in the Los Angeles MSA during the coming year as it gains clusters of business customers; its best success apparently is in winning branch locations of Pacific Bell's business customers.

While PacBell's switching can be accomplished by hauling traffic to the facilities of its parent, PacBell CLEC can lease loop and transport capacity from multiple sources, including AT&T, GST, GTE, MCI WorldCom, NextLink, WinStar, and others. PacBell CLECs stated goal is to lease DS-1 lines and above. PacBell CLEC does not wholesale its lines to other CLECs, but nor does it actively wholesale to ISPs, including PSInet, Netcom, and NetCo.

PacBell CLEC Synopsis (continued)

Los Angeles

Facilities

- No owned facilities. All capacity is leased from other carriers.

Targeting

- Targets small to medium-sized businesses with annual communications expenditures of \$100,000 to \$250,000.
- Nearly all of its customers are multi-carrier, using it for either local access or Internet.
- Currently barred from offering interLATA long distance services.

Strategy

- Out-of-franchise expansion for SBC/Pacific Bell
- Leverages parent PacBell's "brand recognition"
- Lease all facilities initially

Service Offerings

Local access (dial tone)
Switched services (LD)
Dedicated lines (data)
Special services (HiCAP, ATM, ADSL)
Internet

Yes

No

✓

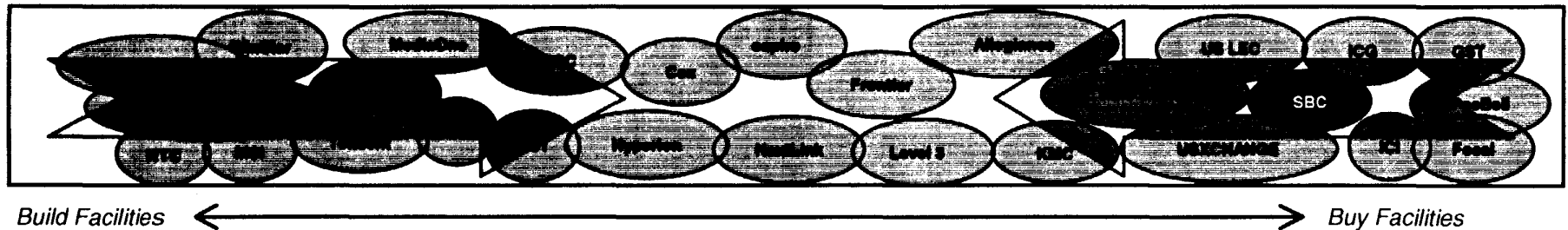
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✓

✓

✓

SBC Synopsis



Like the PacBell CLEC, SBC is a part of Regional Bell Holding Company SBC and is designed for out-of-franchise forays but remains subject to interLATA long-distance restrictions. The company is especially active in the Dallas-Fort Worth Metroplex. Dallas-Fort Worth is the third largest in SBC's territory and the ninth largest metro area nationwide. In 1997, SBC installed fiber rings in GTE's service areas in several northern suburbs in Dallas and Collin counties and has been offering a combination of facilities-based (UNE loop) and resold local services to residential and businesses customers in the Irving, Plano, and Garland suburbs of Dallas.

Currently, there are approximately 17 buildings connected to the competitive facilities (6 in Plano and 11 in Irving). For customers located in off-net buildings, SBC offers resold services. SBC also has collocated facilities in several GTE central offices and markets its packages primarily on the basis of savings for intraLATA toll usage.

The local loop is the only network elements SBC secured from GTE. The company either leases or deploys its own transport capacity, and it utilizes the switching and other elements of its parent, ILEC SBC in Dallas.

SBC Synopsis (continued)

Dallas-Fort Worth

Facilities

20 commercial buildings in Irving and Plano on-net via fiber ring, resale available to off-net locations

Targeting

- **Businesses on fiber rings in Plano and Irving**
- **High-end business customers easier to attract and those generating higher revenues**
- **Offers local, long distance, international calling, enhanced services, high-speed data transmission, and Internet services**

Strategy

- **Less aggressive than other market entrants, possibly due to ILEC business and shareholder expectations**
- **Some expansion plans tied to completion of merger with Ameritech**

Service Offerings

Local access (dial tone)
Switched services (interLATA long distance)
Dedicated lines (data)
Special access services
Internet

Yes

No

✓

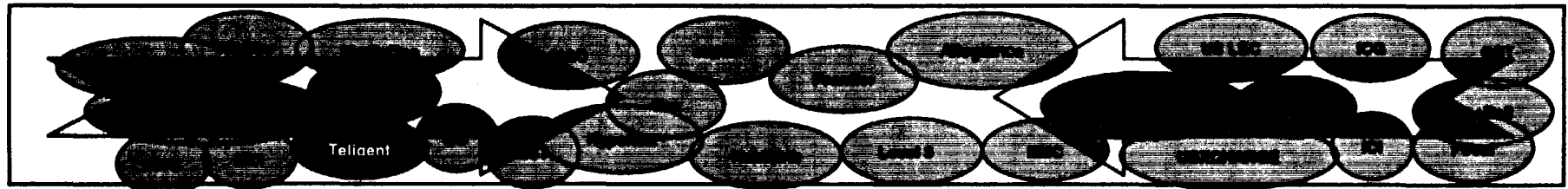
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Teligent Synopsis



Build Facilities ←

→ *Buy Facilities*

As of March 1999, Teligent is active in 24 markets and plans to expand to 40 markets by the end of the year. Teligent deploys a wireless local network and its own class five switches that enable it to bypass ILECs entirely, so no UNEs are necessary for the loop.

Teligent claims its wireless local network offers at least four advantages: (1) economical coverage of an entire metropolitan area, (2) addressability of the entire local business market wherever deployed, (3) lower network costs compared to fiber deployment, and (4) broadband capacity for high-speed data and Internet services. With purportedly low network development costs, Teligent aggressively prices its services upwards of 30% below its wireline competitors.

As an example of addressability, a single-base station for Teligent serves a cell sector about 4 kilometers wide and can provide dedicated two-way bandwidth-on-demand to any building in a line-of-sight. The coverage area utilizing Teligent's 24-gigahertz frequency is approximately two miles. The key to Teligent's network strategy is access to rooftop locations for its antennas; Teligent currently has secured leases or lease options for roof access to 2,400 potential customer buildings and CLEC certification covering all 74 of its eventual planned markets.

Teligent Synopsis (continued)

In the Dallas-Fort Worth Metroplex, Teligent launched its network in July 1998 and has installed the rooftop equipment necessary to access at least 60 buildings. Furthermore, Teligent has agreements in place for access to 60 additional buildings in the Dallas area. At the hub of this network is a Nortel DMS500 switch that routes local switched traffic in the Dallas area. The network also utilizes Nortel routers and ATM switches, enabling Teligent to handle voice and data traffic through its own facilities.

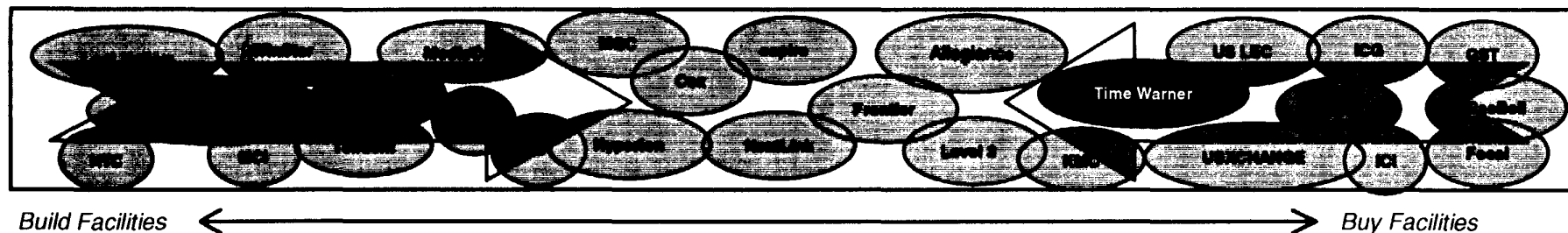
As in Dallas, Teligent operates Nortel DMS500 switches in Tampa and Los Angeles. In Los Angeles, Teligent launched commercial service over its network near the end of the fall of 1998 after initial beta testing of service to three base stations (hub sites) and 19 customer buildings. According to Dallas-based representatives of the company, the only UNEs used by Teligent are inter-office transport and SS7. Teligent provides its own (wireless local) loops, local and tandem switching, operator and directory assistance, and operation support systems. Teligent was not purchasing any UNEs from GTE as of December 31, 1998.

Although Teligent is a relative upstart even among CLECs, it enjoys a strong funding position with approximately \$1.3B in available capital. Furthermore, Teligent is backed by large equity partners with telecommunications experience: the Associated Group, Inc. who has had a history of ventures in wireless, radio and cable television; Telecom Ventures, LLC who owns a majority of publicly-traded LCC International, Inc., one of the world's largest wireless engineering companies; and, Nippon Telegraph and Telephone Corp. of Japan, which has invested \$100 million in Teligent, is one of the world's largest and most technologically advanced telecommunications companies. Additionally, Teligent has named Nortel (Northern Telecom) as its preferred equipment supplier and principal network integrator.

Teligent Synopsis (continued)

| | <i>Dallas-Fort Worth</i> | <i>Tampa</i> | <i>Los Angeles</i> |
|--------------------------|---|-------------------------------------|-------------------------------------|
| Facilities | One class five switch -- DMS500 | One class five switch -- DMS500 | One class five switch -- DMS500 |
| | Broadband wireless local network | Broadband wireless local network | Broadband wireless local network |
| Targeting | <ul style="list-style-type: none"> • National strategy of targeting small to medium-sized businesses (fewer than 50 lines). • Focus on retail sales to end-users, not wholesaling. • If a customer enters into a one year (or longer) contract, discounts are available of up to 30% relative to wireline competitors for similar services. • Offers a suite of bundled services, including long distance, local wireline, and many data/internet services. Market expansion predicated on establishing a base station within a targeted geographic market. | | |
| Strategy | <ul style="list-style-type: none"> • As customers are acquired, fixed wireless transmission equipment is purchased and deployed. • Emphasize high quality services and speed-to-market for its fixed wireless network architecture to provide facilities-based competition. • Interactive support provided via web-based business management tools that allow the customer to view their bill online. | | |
| Service Offerings | Local access (dial tone) | Yes | No |
| | Switched services | ✓ | |
| | Dedicated lines (Data) | ✓ | |
| | Special access services | ✓ | |
| | Internet | ✓ | |

Time Warner Telecom Synopsis



Formed as a partnership of US West and Time Warner in June 1993, Time Warner Telecom builds, operates, and maintains its own SONET-based fiber networks. As of the third quarter 1998, Time Warner operated 19 local networks that consisted of 6500 route miles, 2.5 million voice-grade equivalent circuits, and 16 switches. In addition to these facilities, Time Warner and AT&T announced in February 1999 a joint venture to provide cable telephony through Time Warner's cable system in 33 states. With Time Warner's expanded network, it will be able to bypass ILEC networks completely, requiring no UNEs.

Although Time Warner does not serve residential customers at this time, it currently offers a full complement of analog switched and digital local services (from fractional T1 to OC-12) to business customers. Some ILEC service resale is employed, and customers are subsequently migrated onto Time Warner's network. The joint venture with AT&T will increase Time Warner's capacity for local and long-distance telephony significantly and expand its customer targeting to both residential and business segments.

Time Warner Synopsis (continued)

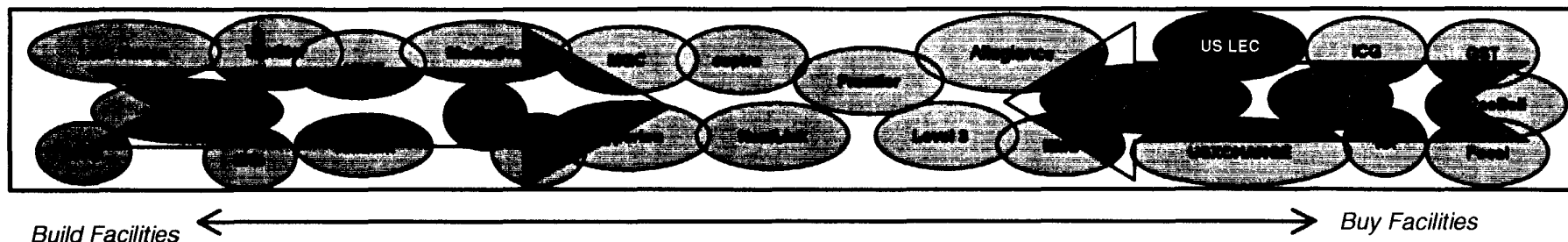
In Tampa, Time Warner operates one Lucent 5ESS switch and a rapidly growing network. Its SONET ring in Tampa is about 75% complete with 217 miles. In comparison, Time Warner's SONET ring in Orlando has over 600 miles deployed. In addition to retailing services over its own facilities in Tampa, Time Warner also an active wholesale provider to other carriers. Time Warner representatives declined, however, to identify any specific arrangements.

In Dallas, Time Warner announced in March 1999 that it will offer dedicated transport, long distance, high-speed Internet access and switched local services to medium and large-sized businesses beginning this summer. Time Warner is constructing a fiber optic network in the area using leased conduit in an agreement with Level 3 Communications, Inc.

Time Warner Synopsis (continued)

| | <i>Tampa</i> | <i>Los Angeles</i> | | | | | | | | | | | | |
|--------------------------|---|---|-----|----|---|--|---|--|---|--|---|--|--|---|
| Facilities | <p>One class five switch</p> <ul style="list-style-type: none">- Lucent 5ESS <p>SONET ring covering Bradenton, Clearwater, Lakeland, Sarasota, St. Pete, Tampa and Zephyrhills</p> | <p>One class five switch</p> <ul style="list-style-type: none">- Lucent 5ESS | | | | | | | | | | | | |
| Targeting | <ul style="list-style-type: none">• Business customers with a preferred minimum of 12 lines• Wholesale customers to utilize unused network capacity• Offers a full complement of analog switched and digital local services (from fractional T1 to OC-12) to business customers• Planned expansion into all market segments with cable-based telephony via joint venture with AT&T | | | | | | | | | | | | | |
| Strategy | <ul style="list-style-type: none">• With existing network and customer base, uses ILEC resale initially with migration on-net• Recent deal with AT&T will position Time Warner as an integrated service provider to all customer segments in 33 states• Joint venture with AT&T will provide local and long distance capabilities with complete bypass of ILEC networks. | | | | | | | | | | | | | |
| Service Offerings | <p>Local access (dial tone)</p> <p>Switched services including long distance</p> <p>Dedicated lines (data)</p> <p>Special access services</p> <p>Internet</p> | <table><tr><th>Yes</th><th>No</th></tr><tr><td>✓</td><td></td></tr><tr><td>✓</td><td></td></tr><tr><td>✓</td><td></td></tr><tr><td>✓</td><td></td></tr><tr><td></td><td>✓</td></tr></table> | Yes | No | ✓ | | ✓ | | ✓ | | ✓ | | | ✓ |
| Yes | No | | | | | | | | | | | | | |
| ✓ | | | | | | | | | | | | | | |
| ✓ | | | | | | | | | | | | | | |
| ✓ | | | | | | | | | | | | | | |
| ✓ | | | | | | | | | | | | | | |
| | ✓ | | | | | | | | | | | | | |

US LEC Synopsis



US LEC is a rapidly growing facilities-based carrier that provides local, long-distance, and enhanced services. Similar to Focal Communications, US LEC employs a "smart build" strategy of purchasing and deploying switching equipment then leasing fiber optic transmission capacity from other carriers. As of the first quarter 1999, US LEC operated 12 Lucent 5ESS Any Media™ switches and has announced plans to install four additional switches by the end of the year. Furthermore, US LEC has begun installing Alcatel MegaHub 600ES tandem switches to complement its Lucent switches, thereby improving its ability to offer calling card, toll-free, operator, and Virtual Private Network (VPN) services.

US LEC targets business, institutional, and government customers as well as Internet service providers with a full range of offerings: local, long-distance, enhanced services, Internet access, and data networking. Since US LEC's facility deployment emphasizes a regional clustering of operations, it claims a growing portion of its customers' calling is routed onto its own network.

In Tampa, US LEC installed a Lucent 5ESS switch in December 1998: the fourth switch US LEC has deployed in Florida and an example of US LEC's regional strategy. At that time, US LEC purchased no UNEs or resold services from GTE in the area.

US LEC Synopsis (continued)

Tampa

Facilities

One class five switch
– Lucent 5ESS

Targeting

- Targets business, institutional, and government customers as well as Internet service providers
- Offers local, long-distance, enhanced services, Internet access, and data networking

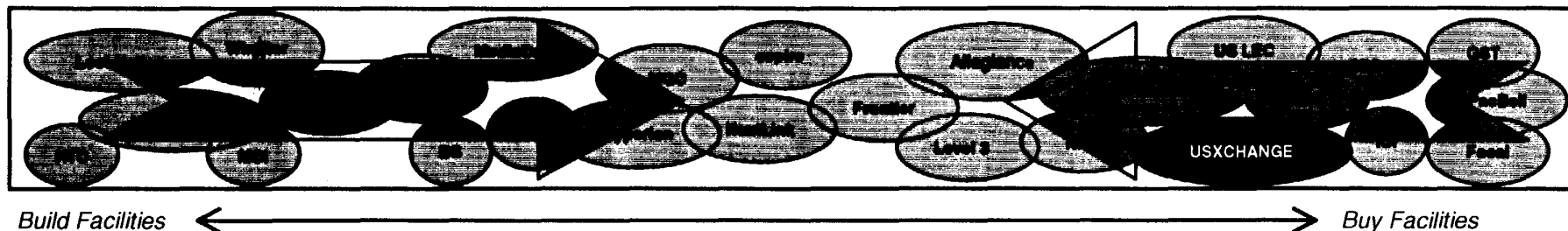
Strategy

- Employs a regional clustering strategy
- Employs a "smart-build" strategy: deploys its own class five switches and utilizes transport facilities of other carriers
- Derives a significant portion of its revenues from reciprocal compensation arrangements with the ILECs, particularly Bell South

Service Offerings

| | Yes | No |
|---|-----|----|
| Local access (dial tone) | ✓ | |
| Switched services including long distance | ✓ | |
| Dedicated lines (data) | ✓ | |
| Special services | ✓ | |
| Internet | ✓ | |

USXCHANGE Synopsis



Founded in 1996, USXCHANGE (USX) is a privately held facilities-based carrier that operates in the upper mid-west United States. As of mid-1998, USX operated networks in four cities and stated plans to expand to at least 14 additional markets. USX initially employs ILEC service resale and then shifts customers onto its own network as capacity is built and as economically justified. USX has a Lucent 4ESS switch in each of its four markets, and it typically operates its own metropolitan fiber networks.

USX focuses primarily on small to medium-sized business customers with an integrated service offer and a lower price point than its ILEC competitors. Specifically, USX bundles local, long-distance, toll-free calling, Centrex, data, paging, and Internet access onto a single monthly invoice. The company also advertises savings of 5–15% off the comparable rates from Ameritech and GTE.

In Fort Wayne, USX was the first CLEC to provide local service and has invested approximately \$30 million to build its network infrastructure. USX has constructed two 72 strand fiber rings that follow a 45 mile path around GTE's eight central offices in Fort Wayne. At the hub of USX's network is a Lucent 5ESS switch capable of supporting voice, data, long distance, and Internet services. Although USX employs significant service resale from GTE in Ft. Wayne, it has begun to serve customers using UNE loops. Local representatives in Fort Wayne indicate that USX eventually will expand its focus to include residential customers and suggested that its ideal mix of business and residential customers would be a 70%/30% mix in favor of businesses.

USXCHANGE Synopsis (continued)

Fort Wayne

Facilities

One class five switch
-- Lucent 5ESS

Two 72 strand SONET rings covering 45 route miles

Targeting

- Small and medium-sized businesses, with a stated intention eventually to expand to residential service
- Bundles local, long-distance, toll-free calling, Centrex, data, paging, and Internet access onto a single monthly invoice

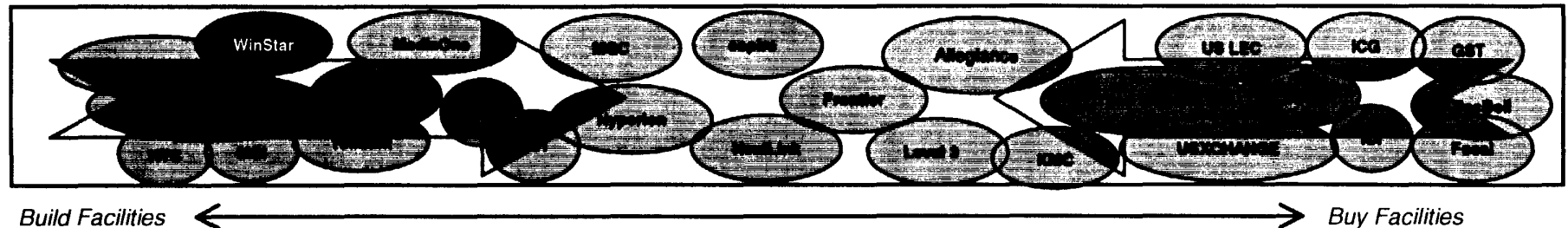
Strategy

- Initially utilizes ILEC service resale then shifts customers on-net as economically justified
- Uses ILEC UNE loops in conjunction with its own switching and transport

Service Offerings

| | Yes | No |
|---|-----|----|
| Local access (dial tone) | ✓ | |
| Switched services including long distance | ✓ | |
| Dedicated lines (data) | ✓ | |
| Special access services | ✓ | |
| Internet | ✓ | |

WinStar Synopsis



Similar to Teligent, WinStar is a facilities-based carrier that utilizes a fixed wireless loop technology as its primary network architecture. In contrast to Teligent, however, Winstar pursues both retail and wholesale customers, providing local loop alternatives to other carriers. WinStar typically enters markets by using ILEC resold services or UNE loops, and then it migrates customers to its own facilities as economically justified. WinStar's market entry strategy may be summarized as follows:

- Identify target buildings
- Acquire roof rights
- Install a switch on parallel paths
- Replace resold lines with "wireless fiber" connections directly to the switch or to hub sites that are connected to the switch
- Pre-wire target buildings
- Sell to customers in target buildings

WinStar's approach significantly reduces its reliance on UNEs, and it provides flexibility for total bypass of ILEC loop and switching facilities.

As a retail provider, Winstar offers a comprehensive set of services targeted towards small and medium-sized business customers: local, long distance, Internet, enhanced services, and information services. WinStar also offers Centrex, trunks, and digital T-1 service for customers with PBX (Private Branch Exchange) equipment on premise. And like Teligent, WinStar targets a price point about 25% below its wireline competitors.

WinStar Synopsis (continued)

As a wholesale provider, WinStar serves two important market niches: (1) facilities-based extension to existing competitive networks and (2) opportunities for resellers to use WinStar's capacity. WinStar positions itself as a quick, cost-effective solution for carriers to achieve the following results:

- Extend the reach of an existing fiber ring
 - Extend networks to new buildings
 - Reduce time to market
 - Increase capacity
 - Optimize working capital
- Provide local transport
- Interconnect cell sites in PCS/Cellular networks
- Serve as the primary link between buildings in a private network application
- Add route diversity (alternative path routing) or backups in any of these applications
- Provide bandwidth capable of handling voice, data and video applications.

Among markets profiled in this research, Dallas was one of the first that WinStar entered. Consistent with its strategy to install facilities in a central business district and then branch out to nearby markets, WinStar expanded its operations into neighboring Fort Worth in the first quarter of 1998. In the Metroplex, WinStar has placed transmission equipment on at least 50 buildings and has agreements in place for an additional 150 buildings; some of these buildings already are pre-wired and awaiting placement of a rooftop antenna. WinStar has similar network configurations in Tampa and Los Angeles, and the company operates at least one Lucent 5ESS switch to route local traffic in each market. In the greater Los Angeles area, WinStar has three Lucent 5ESS switches, and in Dallas-Fort Worth it has one. Data capability is provided by Newbridge ATM switches and Cisco routers. WinStar representatives indicated the company employs some UNEs for interoffice transport, SS7, and the loop, but it did not do so from GTE as of December 31, 1998. WinStar representatives also indicated that the company does not purchase UNEs for local switching, tandem switching, operator services, or directory assistance.

WinStar Synopsis (continued)

| | <i>Dallas-Fort Worth</i> | <i>Tampa</i> | <i>Los Angeles</i> |
|--------------------------|---|--|---|
| Facilities | One class five switch – Lucent 5ESS | One class five switch – Lucent 5ESS | Three class five switches -- All Lucent 5ESS |
| | Broadband wireless local network | Broadband wireless local network | Broadband wireless local network |
| Targeting | <ul style="list-style-type: none"> • Retail. Based on building locations, small and medium-sized businesses in 24 markets. • Retail. Offers broadband services and bundled packages at discounted prices coupled with a high degree of customer care. • Wholesale. Offers wholesale loop alternatives for facilities-based carriers. • Wholesale. Offers service resale opportunities to non-facilities based CLECs. | | |
| Strategy | <ul style="list-style-type: none"> • Prefers to use own facilities due to the higher margins. • Employs ILEC UNEs and resold services as an initial entry strategy; migrates customers on-net as economically justified. • Utilizes fixed wireless network architecture that purportedly is less costly than fiber deployment; this cost advantage is expected to increase over time as the wireless technology advances. • Fixed wireless technology purportedly offers flexibility and speed-to-market advantages with minimal reliance on the ILEC facilities. | | |
| Service Offerings | Local access (dial tone) Switched services including long distance Dedicated lines (data) Special access services Internet | Yes ✓ ✓ ✓ ✓ ✓ | No |

I declare under penalty of perjury that the foregoing, which was prepared under my direction, is true and correct.

MAY 24, 1998
executed on


Paul Rappoport, Ph.D.

Tampa